

REMARKS

Request for Reconsideration, Claims Pending

The application stands subject to a non-final Office action mailed on 26 December 2007. Reconsideration of the claimed invention in view of the amendments above and the discussion below is respectfully requested.

The Specification has been amended grammatically and idiomatically including the changes suggested by the Examiner. No new matter has been added. A Substitute Specification and a marked-up copy thereof have been submitted herewith.

Claims 1, 2, 10, 12, 15 and 20 were amended grammatically to include the term "and" as suggested by the Examiner. Claims 1, 10, 12, 13 15 and 20 were also amended to cover a "mobile" wireless communication device. Support for the latter amendment may be found throughout the original specification, which is concerned with determining the timing advance of the mobile station as it moves relative to a base station within a wireless communication network.

The Examiner has not rejected Claim 10. Applicants assert that Claim 10 patentably distinguished over the prior art for at least the reasons set forth in Applicants' prior responses.

Claims 1-10 and 12-23 are pending.

Arguments re: Jokimies & Nam

Rejection Summary

Claims 1-8 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 6,526,267 (Jokimies) in view of GB 2383215 (Nam).

Discussion of Claim 1

Claim 1 was amended to indicate that the mobile device determines its timing advance (TA) from a look-up table stored on the device. Support for this amendment may be found in the original specification in paragraph [0018].

Jokimies and Nam fail to disclose or suggest a

... method in a mobile wireless communications device, the method comprising:
determining a distance of the wireless communications device from a base station;
determining timing advance using a look-up table, at the wireless communications device, for the base station based on the distance of the wireless communications device from the base station;
and
using the timing advance determined for transmitting to the base station.

The Examiner concedes that Jokimies fails to disclose using the "... the timing advance determined for transmitting to the base station...." Nam computes TA at the base station and sends the TA to the mobile station

(MS). Jokimies indicates that the MS measure the TA when the distance between the MS and BS is 35 km or less. Jomikes does not elaborate on how the TA is determined. Neither Jokimies nor Nam suggest a MS that determines TA from a look up table based on the distance between the MS and BS. Claim 1 is thus patentably distinguished over Jokimies and Nam.

Discussion of Claim 4

Regarding Claim 4, Jokimies and Nam fail to disclose or suggest in combination with Claim 2,

... obtaining the location of the base station based on known timing advance information for different locations with a cell served by the base station.

At col. 4, lines 13-16 (referenced by the Examiner), Jokimies discloses that the MS monitors the TA and signal strengths from neighboring base stations to know whether the MS is within its home area. Claim 4 requires that the MS determine the location of the BS based on known TA information for different locations served by the BS. Claim 4 is thus further distinguished over Jokimies and Nam.

Discussion of Claim 6

Regarding Claim 6, Jokimies and Nam fail to disclose or suggest in combination with Claim 2,

... obtaining the location of the base station from a table of base station locations stored on the wireless communications device.

In FIG. 1, step 4 of Jokimies, the MS measure and stores the RSS for the BCCH and uses this information to determine the distance of the mobile station to the BS. Jokimies does not determine the location of the BS from a table of base station locations stored in the MS. Claim 6 is thus further patentably distinguished over Jokimies and Nam.

Arguments re: Chen

Rejection Summary

Claims 12-17 and 20 stand rejected under 35 USC 102(e) for anticipation by U.S. Publication No. 2003/0139186 (Chen).

Discussion of Claim 12

Regarding Claim 12, Chen fails to disclose a

... method in a mobile wireless communications device, the method comprising:

obtaining first timing information for the wireless communications device at a first known location relative to a base station;

obtaining second timing information for the wireless communications device at a second known location relative to the base station; and

determining a location of the base station based on the first and second timing information and based on the first and second known locations.

Chen discloses determining a location of a mobile station (MS) based on a set of candidate locations, which are determined using timing advance. In paragraph [0025] of Chen, also referenced by the Examiner, the base station (BS) determines the TA for the MS and uses upper and lower bounds of the TA to estimate the distance between the MS and BS. Claim 12 requires that the MS obtain first and second timing information based on corresponding known locations of the MS. Claim 12 also requires that the MS determine the location of the BS based on the first and second timing information. In Chen, the BS estimates the distance between the MS and the BS. Claim 12 is thus patentably distinguished over Chen.

Discussion of Claim 13

Regarding Claim 13, Chen fails to disclose a

- ... method in mobile wireless communications device, the method comprising:
 - determining a difference between a current cell timing and a prior cell timing for a common serving cell;
 - determining a current timing advance for the common serving cell using the difference between the current cell timing and the prior cell timing and using a prior timing advance corresponding to the prior cell timing.

Chen discloses determining a location of a mobile station (MS) based on a set of candidate locations, which are determined using timing advance. In paragraph [0025] of Chen, also referenced by the Examiner, the base station (BS) determines the TA for the MS and uses upper and lower bounds of the TA to estimate the distance between the MS and BS. Claim 13

requires that the MS determine a difference between a "current cell timing" and a "prior cell timing" for a "common serving cell". Claim 13 also requires that the MS determine a "current timing advance using the difference between the current cell timing and the prior cell timing and using a prior timing advance corresponding to the prior cell timing". In Chen, unlike Claim 13, the BS estimates the TA for the MS. Moreover, Chen does not indicate how the TA is determined. Claim 13 is thus patentably distinguished over Chen.

Discussion of Claim 15

Regarding Claim 15, Chen fails to disclose a

... method in a mobile wireless communications device having a look-up table providing timing advance information associated with different locations relative to at least one base station, the method comprising:

determining a location of the wireless communications device;
and
determining timing advance information for the location of the wireless communication device from the look-up table.

Chen discloses determining a location of a mobile station (MS) based on a set of candidate locations, which are determined using timing advance. In paragraph [0024] of Chen, referenced by the Examiner, the base station (BS) computes the timing advance (TA) for the mobile station (MS) and sends the TA to the MS in a control message. In paragraph [0025] of Chen, also referenced by the Examiner, the base station (BS) determines the TA for the MS and uses upper and lower bounds of the TA to estimate the distance between the MS and BS. Claim 15 requires that the MS determine timing

advance information, for a particular location of the MS, using a look-up table on the MS. Claim 15 is thus patentably distinguished over Chen.

Discussion of Claim 16

Regarding Claim 16, Chen fail to disclose in combination with Claim 15,

... determining timing advance information for the location of the wireless communication device using timing advance information in the look-up table only if the location of the wireless communications device is within a specified distance of a location in the look-up table for which timing advance information is provided.

Claim 16 conditions the MS's determination of the TA using the look-up table based on a distance of the MS from a location in the look-up table for which the TA is provided. In Chen, the BS determines the TA for the MS. Claim 16 is thus further patentably distinguished over Chen.

Discussion of Claim 17

Regarding Claim 17, Chen fail to disclose in combination with Claim 15,

... obtaining timing advance information from a source other than the look-up table if the location of the wireless communications device is not within a specified distance of a location in the look-up table for which timing advance information is provided.

Claim 17 indicates that the MS obtains the TA from a location other than the look-up table if the MS is not within a specified distance of a location in the

look-up table for which timing advance information is provided. In Chen, the BS determines the TA for the MS. Claim 17 is thus further patentably distinguished over Chen.

Discussion of Claim 20

Regarding Claim 20, Chen fails to disclose a

... method in a mobile wireless communications device, the method comprising:
determining timing advance on the wireless communications device; and
transmitting a modified burst to a network using the timing advance determined on the wireless communications device.

Chen discloses determining a location of a mobile station (MS) based on a set of candidate locations, which are determined using timing advance. In paragraph [0024] of Chen, referenced by the Examiner, the base station (BS) computes the timing advance (TA) for the mobile station (MS) and sends the TA to the MS in a control message. In paragraph [0025] of Chen, also referenced by the Examiner, the base station (BS) determines the TA for the MS and uses upper and lower bounds of the TA to estimate the distance between the MS and BS. Claim 20 requires that the MS determine the TA. In Chen, the BS determines the TA. Claim 20 is thus patentably distinguished over Chen.

Arguments re: Chen & Scott

Rejection Summary

Claims 21-22 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Publication No. 2003/0139186 (Chen) in view of U.S. Patent No. 6,388,997 (Scott).

Discussion of Claim 22

Regarding Claim 22, Chen and Scott fail to disclose in combination with Claim 20,

... transmitting the modified burst includes transmitting a modified normal burst having an increased guard time relative to an un-modified normal access burst, without first transmitting an access burst.

The Examiner relies upon Scott for teaching that an increase or decrease of the guard time is relative to propagation delay. Neither Chen nor Scott however suggest transmitting a burst having a modified guard time "... without first transmitting an access burst." Claim 22 is thus further patentably distinguished over Chen and Scott.

Arguments re: Chen & Johnson

Rejection Summary

Claim 23 stands rejected under 35 USC 103(a) as being unpatentable over U.S. Publication No. 2003/0139186 (Chen) in view of U.S. Patent No. 5,839,071 (Johnson).

Discussion of Claim 23

Regarding Claim 23, Chen and Scott fail to disclose in combination with Claim 20, a mobile station that receives "...timing advance correction from the network after sending the modified burst to the network."

The Examiner relies upon Johnson for teaching a BS that provides TA information to an MS. However, there is no suggestion in Johnson for the BS to provide a TA "correction" to an MS after receiving a modified burst from the MS. Claim 23 is thus further patentably distinguished over Chen and Johnson.

Arguments re: Chen & Jokimies

Rejection Summary

Claims 18-19 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Publication No. 2003/0139186 (Chen) in view of U.S. Jokimies.

Discussion of Claim 18

Regarding Claim 18, Chen and Jokimies fail to disclose in combination with Claim 15, "... updating the look-up table with the timing advance information obtained from a source other than the look-up table."

Chen does not disclose an MS that determines timing advance information using a look-up table on the MS. In Chen, the BS determines the TA for the MS. Contrary to the Examiner's suggestion, Jokimies does not disclose the use of a look-up table on MS to determine TA. Thus there is not suggestion for "updating the look-up table..." as in Claim 18. Claim 18 is thus further patentably distinguished over Chen and Jokimies.

Discussion of Claim 19

Regarding Claim 19, Chen and Jokimies fail to disclose in combination with Claim 18, "... determining timing advance information from the look-up table when communicating voice over a packet network."

Chen does not disclose an MS that determines timing advance information using a look-up table on the MS. In Chen, the BS determines the TA for the MS. Contrary to the Examiner's suggestion, Jokimies also fails to disclose the use of a look-up table on MS to determine TA. Claim 19 is thus further patentably distinguished over Chen and Jokimies.

Prayer For Relief

In view of the amendments and the discussion above, the Claims of the present application are in condition for allowance. Kindly withdraw

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Examiner H. Foud
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any rejections and objections and allow this application to issue as a United States Patent without further delay.

Respectfully submitted,

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